UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,561	11/20/2001	Mitsuru Endo	MAT-8201US	1678

7590 02/22/2007	**EXAMINER**
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ART UNIT	PAPER NUMBER
2626	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	09/989,561	ENDO ET AL.
	Examiner	Art Unit
	Huyen X. Vo	2626

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 November 2006</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3,4,9,13,17 and 23-31</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,3,4,9,13,17 and 23-31</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 January 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>10/6/2006</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   Applicant's arguments have been considered but are moot in view of the new

ground(s) of rejection in view of Huang et al. (US 5829000) necessitated by claim

amendment.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 3, 5, 13, 17, and 23-31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Pfister et al. (WO 96/03741, from IDS) in view of Franz et al. (US

6178401).

4.   Regarding claims 1, 13, and 17, Pfister et al. disclose a method and a computer

readable medium for inputting a text, comprising:

        (a) a step for inputting a sentence by speech (*input device 6 in figure 1; also*

referring to 2nd paragraph on page 28);

        (b) a step for preparing word-string candidates which consist of one of several

words from the inputted sentence by performing speech recognition processing (*3rd*

paragraph page 18 and 2nd paragraph page 19; recognizing a current "speech

segment"; N most possible phoneme sequences within the speech segment, wherein

the speech segment can be a single word or a phrase);

(c) a step for displaying the prepared candidates (*last paragraph on page 21 to*

end of second paragraphs on page 22); and

(d) a step for selecting from among the displayed candidates (*last paragraph on*

page 21 to end of second paragraphs on page 22 and/or referring to pages 24-25).

Pfister et al. fail to specifically disclose that the candidates prepared in the

candidate preparing step (b) are obtained by repetition of an extension processing step

(b1) for performing an extension of words, the extension processing step (b1)

determining whether to link the words based on a word-based linkage probability

obtained by a language model. However, Franz et al. teach that the candidates

prepared in the candidate preparing step (b) are obtained by repetition of an extension

processing step (b1) for performing an extension of words, the extension processing

step (b1) determining whether to link the words based on a word-based linkage

probability obtained by a language model (*col. 5, line 6 to col. 6, line 67, particularly col.*

6, lines 42-67).

Since Pfister et al. and Franz et al. are analogous because they are from the

same field of endeavor, it would have been obvious to one of ordinary skill in the art at

the time of invention to modify Pfister et al. by incorporating the teaching of Franz et al.

in order to improve speech recognition accuracy.

5.　　Regarding claim 5, Pfister et al. disclose an apparatus for inputting a text, comprising:

an input section for inputting a sentence by speech (*input device 6 in figure 1; also referring to 2nd paragraph on page 28*);

an utterance pre-processing section for extracting a feature amount of the speech inputted from the input section (*pages 15-17*);

a word candidate preparing section for preparing following word-string candidates from a fixed word-string by using a language model (*phoneme identification section on pages 15-19*);

a word-string preparing section for preparing a word-string candidates which consists of one to several words from the extracted feature amount and the word-string candidate by using the language model (*phoneme identification section on pages 15-19*);

a display section for displaying the prepared word-string candidates (*page 20, line 1-36*);

an operating section for a user to select from among the word-string candidates being displayed (*Display and Editing Mode and Phonetic Symbol String Editing sections on pages 20-22*); and

a candidate-preparation instructing section for instructing the word candidate preparing section to prepare the following word candidate from the word-string candidate selected by the operating section (*phoneme identification section on pages 15-19*).

Pfister et al. fail to specifically disclose that the word-string candidates prepared in the preparing section are obtained by repetition of an extension process for performing an extension of words, the extension process determining whether to link the words based on a word-based linkage probability obtained by a language model. However, Franz et al. teach that the word-string candidates prepared in the preparing section are obtained by repetition of an extension process for performing an extension of words, the extension process determining whether to link the words based on a word-based linkage probability obtained by a language model (*col. 5, line 6 to col. 6, line 67, particularly col. 6, lines 42-67*).

Since Pfister et al. and Franz et al. are analogous because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Pfister et al. by incorporating the teaching of Franz et al. in order to improve speech recognition accuracy.

6.   Regarding claim 3, Pfister et al. further disclose that the candidate preparing step (b) further including a process to update an arrangement of the candidates according to an acoustic score after the repetition of the extension processing (*adaptive feedback section on pages 26-27*).

7.   Regarding claim 23, Pfister et al. fail to specifically disclose a method for inputting a text according to claim 1, wherein, in the step of repeating the candidate preparing step (b), the displaying step (c) and the selecting step (d), when a word-string

is selected in advance, the candidate preparing step (b) determines the word-string as

the candidate based on either language information or acoustic information. However,

Franz et al. further teach in the step of repeating the candidate preparing step (b), the

displaying step (c) and the selecting step (d), when a word-string is selected in advance,

the candidate preparing step (b) determines the word-string as the candidate based on

either language information or acoustic information (*col. 3, lines 35-49*).

Since Pfister et al. and Franz et al. are analogous because they are from the

same field of endeavor, it would have been obvious to one of ordinary skill in the art at

the time of invention to modify Pfister et al. by incorporating the teaching of Franz et al.

in order to reduce processing time by reducing the number of candidates.

8.   Regarding claims 24, 26, 38, and 30, Pfister et al. fail to specifically disclose a

method for inputting a text according to claim 1, wherein the extension processing step

(b1) determines to link the words when a judgment is made for linking the words and not

to link the words if the judgment is made for not linking the words. However, Franz et

al. further teach that the extension processing step (b1) determines to link the words

when a judgment is made for linking the words and not to link the words if the judgment

is made for not linking the words (*col. 6, lines 1-41, words are linked together based on

path probability*).

Since Pfister et al. and Franz et al. are analogous because they are from the

same field of endeavor, it would have been obvious to one of ordinary skill in the art at

the time of invention to modify Pfister et al. by incorporating the teaching of Franz et al.

in order to improve speech recognition accuracy.

9.   Regarding claims 25, 27, 29, and 31, Pfister et al. fail to specifically disclose a

method for inputting a text according to claim 1, wherein the extension processing step

(b1) prepares longer word-string candidates when it is determined to link the words than

if it is determined not to link the words. However, Franz et al. teach that the extension

processing step (b1) prepares longer word-string candidates when it is determined to

link the words than if it is determined not to link the words (*col. 6, lines 1-41, obviously a*

word-string is longer if a word candidate is added the string than word-string without a

candidate word added to it).

        Since Pfister et al. and Franz et al. are analogous because they are from the

same field of endeavor, it would have been obvious to one of ordinary skill in the art at

the time of invention to modify Pfister et al. by incorporating the teaching of Franz et al.

in order to improve speech recognition accuracy.

10.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pfister et

al. (WO 96/03741, from IDS) in view of Franz et al. (US 6178401), and further in view of

Official Notice.

11.   Regarding claim 9, Pfister et al. fail to specifically disclose that the apparatus is

included in a cellular telephone. However, examiner takes official notice that cellular

telephone having speech recognition capability is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate speech recognition capability in the cellular telephone in order to enable users to dial telephone numbers by voice without having their eyes off the road while driving.

12.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pfister et al. (WO 96/03741, from IDS) in view of Franz et al. (US 6178401), as applied to claim 1, respectively, and further in view of Huang et al. (US 5829000).

13.   Regarding claim 4, the modified Pfister et al. fail disclose that the extension process is ended by reaching of the number of phrase candidates subjected to said extension process by a predetermined number as counted from a top rank in a language score. However, Huang et al. teach a re-sizeable correction that enables the user to set a limit on the number of candidate words/phrases to be displayed on the display for the user to select (*referring to col. 7-8*).

    Since the modified Pfister et al. and Huang et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Pfister et al. by incorporating the teaching of Huang et al. in order to provide rapid correction of misrecognized words/phrases.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
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USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HXV   2/11/2007

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RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER